

ABSTRACT OF THE DISCLOSURE

An electronic apparatus includes an insulative substrate containing an aluminum-based glass and a layer containing a semiconductive material over the substrate. The insulative substrate can include aluminum oxycarbide. The insulative substrate can exhibit a CTE sufficiently close to a CTE of the semiconductive material layer such that a strain of less than 1% would exist between a 1000 Angstroms thickness of the semiconductive material layer and the insulative substrate. The semiconductive material layer can include monocrystalline silicon. The electronic apparatus can be a silicon-on-insulator integrated circuit. An electronic apparatus fabrication method includes forming an insulative substrate containing an aluminum-based glass and forming a layer containing a semiconductive material over the substrate. Forming the insulative substrate can include forming a mixture of a powder containing aluminum, a powder containing silicon, and a powder containing carbon, reacting the mixture by spontaneous ignition, and forming the reacted mixture into a plate. Forming the semiconductive material layer can include removing a layer of silicon from a monocrystalline silicon wafer and bonding the silicon layer to the insulative substrate.